SIMPLE SPREADSHEET THERMAL MODELS FOR CRYOGENIC APPLICATIONS, A. E. Nash, Jet Propulsion Laboratory, Pasadena, CA 91109- Self consistent circuit analog thermal models, that can be run in commercial spreadsheet programs on personal computers, have been created to calculate the cooldown and steady state performance of cryogen cooled Dewars. The models include temperature dependent conduction and radiation cil'eels. The outputs of the models provide temperature distribution and Dewar performance information. These models have been used to analyze the Cryogenic Telescope Test Facility (CTTF). The facility will be on line in early 1995 for its first user, the Infrared Telescope Technology Testbed (1'1''1''1'), for the Space Infrared Telescope Facility (SIRTF) at JPL. The model algorithm as well as a comparison of the model predictions and actual performance of this facility will be presented.

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